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(54) MOLECULAR-BEAM CRYSTAL GROWTH DEVICE

(57) Abstract:

PURPOSE: To eliminate the need for the frequent opening and closing of a molecular beam source shutter and to prolong the service life of the shutter by rotating and supporting a substrate holder fixing plural substrates by a manipulator and separating the space extending from directly under the manipulator to a molecular beam source cell into each molecular beam cell-occupied space.

CONSTITUTION: The manipulator 2 for rotating and supporting a substrate holder 3 fixing plural substrates W is provided in a molecularbeam crystal growth chamber 1. The space extending from directly under the manipulator 2 to the plural molecular beam source cells 4 provided on the wall of the growth chamber 1 is separated into each molecular beam cell 4 occupied space by a partition mechanism 6 consisting of a conical cylinder part 14, a partition wall part 15, etc. The growth chamber 1 is then evacuated to a super high vacuum, the manipulator 2 is rotated, the substrates W

are successively passed through each molecular cell 4 occupied space, the substrate is irradiated by only the molecular beam from each molecular beam source cell 4, and an epitaxial film is successively grown on the substrates W.

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